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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/676,550	10/01/2003	Tricia Susan Reighard	29157.00	7672

7590 07/19/2005

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International Paper  
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EXAMINER

NAKARANI, DHIRAJLAL S

ART UNIT	PAPER NUMBER
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1773

DATE MAILED: 07/19/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

## Office Action Summary

Application No.

10/676,550

Applicant(s)

REIGHARD ET AL.

Examiner

D. S. Nakarani

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 23 April 2004.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-14 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-14 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 23 April 2004 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☒ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date 10/03, 3/04 & 3/05.
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_\_.

### DETAILED ACTION

1. Applicants are requested to NOTE that claim 11 is missing, therefore claims 12-15 are renumbered as claims 11-14 respectively as per 37 CFR 1.126.

2. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

3. Claims 1-14 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claim 1, line 2, the phrases "interior surface" and "exterior surface" renders claim indefinite since claim is directed to a paperboard laminate and the paperboard substrate has all exterior surfaces.

The exterior surface and the interior surface with respect to what? Also lines 4-6, phrases "a tie layer to the high density polyethylene layer", "a barrier layer interior to the high density polyethylene layer" and "second tie layer interior to the barrier layer" cannot be understood and renders claim confusing. It is not clear from the claim language how layers are arranged in the claimed laminate.

Claim 3, lines 3-5, the phrase "ethylene vinyl alcohol copolymers -----liquid crystalline polymers" renders improper Markush Group. It is not clear whether barrier layer is made with ethylene vinyl alcohol copolymers containing oxygen scavenging EVOH or ethylene vinyl alcohol copolymer? Clarification and/or correction requested. What is meant by oxygen

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scavenging EVOH? Barrier layer of EVOH nano composites cannot be understood. What is it?

Also “blends of EVOH with ----- crystalline polymers” cannot be understood. Applicants are trying to claim blend of EVOH with all recited polymers or one of the recited polymer?

Clarification and/or correction requested.

Claim 4, lines 1-2, the phrase “barrier layer is blended with” renders claim indefinite.

How one can blend layer with the recited materials.

Claim 5, line 2, phrase “ethylene vinyl alcohol” cannot be understood. Applicants are trying to claim ethylene vinyl alcohol copolymer or a mixture of ethylene and vinyl alcohol?

Claim 7, lines 1-2, the phrase “the second polyolefin layer” lacks clear antecedent bases. No second polyolefin has been previously recited. Therefore limitation cannot be understood.

Claim 8, line 2, the phrase “density range” renders claim confusing. It is not clear whether high density polyethylene has recited density range or high density polyethylene has density in the range from  $0.94 \text{ g/cm}^3$  to  $0.96 \text{ g/cm}^3$ ? Clarification and/or correction requested.

Claim 9, lines 2-3, the Markush group members “ethylene acrylic acids, ethylene methyl acrylic acids and ethylene vinyl acetates” cannot be understood. It is not clear whether applicants are trying to claim a mixture of recited monomers or copolymers of recited monomers? Clarification and/or correction requested.

Claim 10, line 2, the phrase “an ethylene based copolymer” cannot be understood since claim 10 depends from claim 9 which limits to recited Markush group members and ethylene based copolymer is not recited in the Markush group.

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Renumbered claim 11, line 2, the phrase "ethylene vinyl acetate cannot be understood. Is it a mixture of ethylene and vinyl acetate monomers or a copolymer of ethylene and vinyl acetate monomers? Clarification requested.

Renumbered claim 14 is indefinite for the same reasons as for claim 1.

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

5. Claims 1-3 and 5-14 are rejected under 35 U.S.C. 103(a) as being unpatentable over Gibbons et al (U.S. Patent 4,789,575) in view Marano et al (U.S. Patent 5,225,256, herein referred as Marano (1)) and Marano et al (U.S. Patent 5,712,006, herein referred as Marano (2)).

Gibbons et al disclose a paperboard laminate comprising a low-density polyethylene layers (34,46), paperboard (36), tie layers (38, 42) and ethylene-vinyl alcohol copolymer layer as barrier layer (40) (Figure 5). Gibbons et al also disclose a prior art laminates such as low-density polyethylene layers (18, 24), paper board (20) and high-density polyethylene layer (22) (Figure 3). Marano (1) disclose a laminate comprising a paper layer (14), exterior polypropylene layer (12), polyolefin layer (15), tie layers (16, 20), barrier layer (18) and heat sealable polyolefin layer (22) (Figure 1). Marano (1)'s polyolefin layer (15) can be high density polyethylene (column 3, lines 19-65).

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Marano (2) disclose that a high density polyethylene and polypropylene provide varying degrees or barriers to the absorption and/or transmission of moisture. The high density polyethylene layer prevents loss of moisture from food and non-food product during dry shelf storage (column 1, lines 26-29 and column 2, lines 30-46).

Therefore it would have been obvious to a person of ordinary skill in the art at the time of this invention made to utilize disclosure of Marano (1) and Marano (2) in the invention of Gibbons et al to use paperboard coated with high density polyethylene and bonded to the laminate (44) such that the high density polyethylene is between the paperboard (36) and tie layer (38) for preventing moisture loss during dry storage. Gibbons et al's laminate is used for manufacturing cartons.

6. Receipt of Information Disclosure Statements filed with the application October 1, 2003, March 30, 2004 and March 7, 2005 is acknowledged and all references have been made of record. The PTO/5B/08A submitted with the application and the PTO/5B/08A submitted March 20, 2004 are duplicate. Therefore PTO/5B/08A submitted March 30, 2004 have been crossed-out and marked as duplicate to prevent duplication.

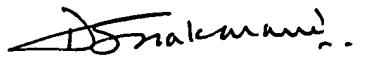
7. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Examiner D.S. Nakarani whose telephone number is (571) 272-1512. The examiner can normally be reached on Tuesday-Friday from 7:00 am to 5:30 pm.

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If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Carol Chaney can be reached on (571) 272-1284. The fax phone number for the organization where this application or proceeding is assigned is (571) 273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

D.S. Nakarani/dh  
June 15, 2005

  
**D. S. NAKARANI**  
**PRIMARY EXAMINER**